Sciences



Communicating with gestures

Naomi Sweller, Elizabeth Austin & Nicole Dargue

WHAT THE RESEARCH SAYS

Non-verbal communication, including hand gestures, can have a big positive impact on the message a child receives. Seeing a meaningful hand gesture accompanying a spoken message can improve children's understanding of the message's meaning.

Gesture Types

Gestures that we use need to be meaningful, and clearly related to the message we are conveying. It is not the same as 'talking with your hands'. Meaningful gestures include pointing movements (such as pointing to a ball), concrete actions (such as 'throwing' a ball) and concrete objects (such as gesturing the shape of a ball). These gestures will be more effective at conveying the message than generic hand movements that are not connected to the content of the verbal speech.



Verbal Content

Watching gestures can help children understand many different types of messages, for example, narrative content (stories), spatial directions (walking a route), and emotional content. Research has found that children have a deeper understanding of the verbal language used when we connect our words with meaningful and related gestures.

Gestures Increase Attention

Research using eye tracking technology has found that children focus their attention more closely on a speaker when their verbal language is accompanied by relevant gestures. Children with Autism, who struggle with verbal communication, showed increased attention to a narrator, and increased understanding of the story, when the narrator used gestures.

Environment Matters

Gestures accompanying verbal communication have been found to have a stronger impact when there is background noise, particularly for individuals with poorer non-verbal memory skills. Children are known to have difficulty with remembering verbal instructions, and this increases when these instructions are delivered in a noisy environment (such as a classroom), where distractions influence the ability for a child to attend to, and therefore remember instructions/messages.

Intuition Counts

Research has found that while there are a range of gestures that can be used to support and extend a verbal message, the most successful gesture is the one that is 'most natural'. Just because two gestures depict the same idea, they are not necessarily equal in their ability to communicate effectively.

PUTTING IT INTO PRACTICE

Educators and parents can implement non-verbal communication strategies to support children's understanding of content in a few key ways:

- Make your gestures directly relate to what you are saying meaningful gestures that are relevant to the verbal content contribute to and impact understanding
- Gestures can be used not only for verbal instruction but also for stories, explanation of activities, and in general dayto-day communication
- Use your intuition try not to overthink the 'best' gesture to use, the most natural will be more effective

FURTHER READINGS

- Dargue, N., Sweller, N., & Jones, M. P. (2019). When our hands help us understand: A meta-analysis into the effects of gesture on comprehension. *Psychological Bulletin*, *145*, 765. doi: 10.1037/bul0000202
- Austin, E. E., & Sweller, N. (2017). Getting to the Elephants: Gesture and preschoolers' comprehension of route direction information. *Journal of Experimental Child Psychology*, *163*, 1-14. doi: 10.1016/j.jecp.2017.05.016
- <u>https://theconversation.com/hand-gestures-help-kids-learn-maths-24347</u>

ABOUT THE AUTHORS



Dr Naomi Sweller, Associate Professor in Developmental Psychology, Department of Psychology.

Naomi is a developmental psychologist with a focus on cognitive development. Based in experimental psychology, her research has strong educational applications. Naomi's main area of research involves the use of gesture as an instructional and communicative tool.



Dr Elizabeth Austin, Postdoctoral Research Fellow, Australian Institute of Health Innovation.

Elizabeth is a human factors and resilience researcher using social psychology theories to understand the way individuals and processes interact in a variety of contexts. Elizabeth is particularly interested in the use of gesture as a communicative tool for overcoming barriers to understanding information.



Nicole Dargue, Combined PhD/Master of Clinical Neuropsychology Candidate, Department of Psychology.

Nicole is currently completing her PhD on the beneficial effects that gesture has on comprehension in typically developing children, adults, and children on the autism spectrum. Nicole aspires to continue this line of research post-PhD to better understand the use of gesture as a means of enhancing comprehension in children with developmental disorders.

FIND OUT MORE Macquarie University NSW 2109 Australia clsw@mq.edu.au mq.edu.au/research/child-learning



ABN 90 952 801 237 CRICOS Provider 00002J